REMARKS

Claims 1-17 are pending in this application. By this Amendment, claims 1 and 5-9 are amended. Support for the amendments can be found throughout the specification as filed. See, for example, page 4, line 9, where it is stated that E is copolymerized with CTFE without any other monomers. No new matter is added.

The Office Action also rejects claims 5-7 and 9-11 under 35 U.S.C. 112, second paragraph. Applicants believe that the rejection under 35 U.S.C. 112, second paragraph, is overcome with the above amendments to the claims. Reconsideration and withdrawal of the rejection under 35 U.S.C. 112, second paragraph, are thus respectfully requested.

The Office Action rejects claims 1 and 13 under 35 U.S.C. 102(b) as being anticipated Abusleme et al. (U.S. Patent No. 6,107,393) or Zolotnitsky et al. (U.S. Published Application No. 2001/0003124). This rejection is traversed.

Amended claim 1 clearly distinguishes the present copolymers which consist only of E and CTFE, and do not include any third monomers, from the ECTFE terpolymer of Abusleme and Zolonitsky which always contain a third hydrogenated monomer.

The polymers of the present invention are completely different from those of the cited references since different molar composition attains to different backbone and accordingly to different properties and behaviour.

As already stated in Applicants' previous response, the technical problem of the present invention was to find a polymer having

- the same good electrical properties of PCTFE (which is formed by 100% CTFE) in combination with the same good mechanical properties of E/CTFE copolymers (50/50 by moles), namely Halar,

thus avoiding the brittle behaviour of PCTFE and the low electrical properties of E/CTFE.

See page 2 of the description; see example 4 in comparison with comparative example 5; see example 17.

The present compositions of

- copolymers consisting of E and CTFE and having an E content ranging from 0.5-20% by moles,

wherein the total number of E of the polymeric composition is 0.5 to 10%, being the CTFE the remaining part 100%, solve the above technical problem.

In addition, the claimed compositions when in admixture with a nucleating agent, such as PTFE, are foamable during extrusion without requiring any foaming/blowing agents, for example gases, which are generally used to form void cells. See page 8, lines 8-11, of the present specification.

The combination of the two cited references (Abusleme and Zolotnisky), both directed to terpolymers of E, CTFE and a third hydrogenated monomer, would not have, by any means, suggested to prepare a composition of copolymers of E and CTFE containing up to 20% of E as presently claimed, in order to obtain a polymer having the same good electrical properties of PCTFE and the same thermoprocessable properties of ECTFE copolymers (50/50).

Applicants again note that the previously submitted considerations about the unexpected results were directed to claim 1, and are thus indirectly to the dependent claims 2 and 3.

A higher second melting temperature attains to a higher thermal stability: what is unexpected is that a composition formed by E/CTFE copolymers containing 0.5-20% by moles of E as those presently claimed and totally containing 5, 7% of E shows a much higher second melting temperature (205, 9°C) with respect to that (179, 8°C) of a E/CTFE copolymer containing substantially the same amount of E/CTFE copolymer containing substantially the same amount of E (5, 1%).

See the description of example 4 in comparison with that of comparative example 10.

For at least the above reasons, reconsideration and withdrawal of the rejections of claim 1 under 35 U.S.C. 102(b) are respectfully requested.

The Office Action also rejects claims 2-3 and 14-15 under 35 U.S.C. 103(a) as being obvious apparently over Abusleme et al. and Zolotnitsky et al. The Office Action also rejects claims 5-11 and 16-17 under 35 U.S.C. 103(a) as being obvious over Abusleme et al. or Zolotnitsky et al. in combination with "Encyclopedia" and Perlman (U.S. Patent No. 4,304,713) or Buckmaster et al. (U.S. Patent No. 5,688,457). The Office Action also rejects claim 4 under 35 U.S.C. 103(a) as being obvious over Abusleme et al. or Zolotnitsky et al. in combination with "Encyclopedia." These rejections are traversed.

Since claims 2 and 3 are dependent from claim 1 which is novel and unobvious over said references for the reasons stated above, claims 2 and 3 are novel and unobvious as well for at least the same reasons.

Furthermore since the composition of claim 1 is novel and unobvious over the cited reference, also the formulations of the present compositions with additives are novel and inventive as well. Accordingly claim 4 is novel and unobvious over the cited references.

As far as claim 5, it is novel and unobvious over the cited prior art in that the combination of the cited references (Perelman and Buckmaster and the "Encyclopedia") does by no means suggest the E/CTFE polymer compositions as presently claimed and the formulation thereof with nucleating agent in order to obtain compositions which are foamed as such during extrusion without using any blowing/foaming agent.

The Applicants' remark that nucleating agent does not correspond to foaming (blowing) agent.

The above non correspondence is supported also by the cited pages of "Encyclopedia" wherein the foaming (blowing) agent at point 2.2. has a different definition from the nucleating/clarifying agent of 2.6 and by the fact that the compounds mentioned for the two classes are different.

The main difference between two classes can be found in that the foaming/blowing agent creates foam when changing its state due to their decomposition while the nucleating agent is a solid which keep its state during the processing/extrusion.

Also the description of Buckmaster clearly evidenced said difference since at col. 1, lines 58-62 it is clearly stated that:

> "Foam cell nucleating agents are normally used to nucleate the formation of voids in the polymer extrudates, so that a foamed extrudate containing small cells is formed by virtue of the presence of blowing agent in the molten resin at the time of extrusion."

The blowing agents/foaming agents are generally compounds that generates gases when decomposing.

In view of the above it is unexpected that the present compositions are foamed as such by extrusion without using any blowing agent/foaming which instead are necessary in the art to form foams in plastics.

Please note that in the cited Buckmaster, the maximum void achieved without using blowing agent, i.e. only in the presence of nucleating agent, is lower than 5% (see col. 8, lines 5-9) and it is considered by Buckmaster as unfoamed (see col. 2, lines 1-5) while the void % in the present invention is high, about 20-30% (see example 15 and 16; Table 4) without using any blowing agent.

On the other hand, Perelman teaches to foam compositions of a meltable perfluorocarbon (FEP) which is not the present ECTFE polymers, containing PTFE as nucleating agent by using a blowing agent, for example fluoroethanes, to form cells, i.e. to foam, which instead is not required by the present composition.

In view of the above, the Applicants agree with the Examiner that is it known to use nucleating agent to form foam but it is surprisingly in view of Buckmaster that the present compositions achieve such a considerable degree of voids without using any foaming/blowing agent.

Therefore, for at least the above reasons, the presently claimed invention would not have been obvious over the applied combination of references. Reconsideration and withdrawal of the rejections of claims 2-3 and 14-15, of claim 4 and of claims 5-11 and 16-17 under 35 U.S.C. 103(a) are thus respectfully requested.

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to Counsel's Deposit Account 01-2300, referring to client-matter number 108910-00128. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300, referring to client-matter number 108910-00128.

Respectfully submitted,

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